ELEC 243: Electronic Measurement Systems
Spring, 2021

Lecture
Chong Xie
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Lab
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Hours
Class: Tues. & Thurs., 9:40 – 11:00 am
Labs: Thurs. 3:10 - 5:50 pm / Fri. 1:30 - 4:10 pm
Office Hours: TBD and by appointment

Course Objectives and Learning Outcomes
The course will give students the skills to design, analyze and construct electronic systems to measure, monitor and control physical properties and events. It spans the areas of circuits, signals, systems and digital processing. It is intended for non-ECE majors.

Upon completion, students should be able to:
- Analyze and simulate basic circuits
- Understand and apply time and frequency domain concepts
- Identify and apply various analog and digital filter types
- Operate electronic lab equipment and tools to measure, test and process electrical signals

Prerequisites
MATH 101, MATH 102, PHYS 102

Text
Electrical Engineering: Principles and Application, 7th Ed. A. R. Hambley, 2018
Class Notes and Lab Materials - distributed on ELEC 243 Canvas page

Materials
A parts kit (<$250) must be purchased for the course in order to do the labs, which can be found in the Canvas announcements for the course.

Exams and Homework
There will be three types of graded material in this course - homework problems, take-home exams, and lab reports. Problem sets will be assigned weekly, and each assignment will typically contain several problems of each type. You are expected to follow the honor code on exams. Collaboration is fine on homework problems, but you must turn in your own work. Lab reports will be graded according to guidelines described in your lab sessions.

Grading

Homework	20%
Exams (3)	40%
Lab Reports	30%

Homework and exams must be turned in before 5 pm on the date specified. Problems turned in within 24 hours will be accepted with 20% penalty. Beyond that extension, no assignment will be accepted.

Absences

Attendance of lab sessions is mandatory unless otherwise arranged with the instructor(s), and failure to attend a lab without instructor permission will result in a 33% penalty to the student's lab report grade. For example, if one student did not attend a lab and received a score of 95% on the lab report prior to the penalty, then the final score for that student would be 95-33=62%.

Accommodation for Disabilities

If you have a documented disability that may affect academic performance, you should: 1) make sure this documentation is on file with Disability Resource Center (Allen Center, Room 111 / adarice@rice.edu / x5841) to determine the accommodations you need; and 2) meet with the instructor(s) to discuss your accommodation needs.

Rice Honor Code

In this course, all students will be held to the standards of the Rice Honor Code, a code that you pledged to honor when you matriculated at this institution. If you are unfamiliar with the details of this code and how it is administered, you should consult the Honor System Handbook at http://honor.rice.edu/honor-system-handbook/. This handbook outlines the University's expectations for the integrity of your academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process.

Syllabus Modifications

Information contained in this syllabus, other than the absence policies, may be subject to change with reasonable advance notice, as deemed appropriate by the instructor(s).